

## **REMARKS**

Upon careful and complete consideration of the Office Action dated February 6, 2007, applicant has amended the claims which, when considered in conjunction with the comments herein below, are deemed to place the present application into condition for allowance. Favorable reconsideration of this application, as amended, is respectfully solicited.

The Office Action rejected claims 1-13 under 35 U.S.C. §101 as being directed to non-statutory subject matter. Said claims have been deleted making the rejection moot.

The Office Action next rejected claims 14-42 under 35 U.S.C. §102(b) as allegedly being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as allegedly being obvious over EP 0447359 (hereinafter referred to as “Wong et al.”), JP 7067536 and U.S. Patent No. 5,525,360 (hereinafter referred to as “Yatka et al.”). The Office Action cited Wong et al. for teaching a synergistic sweetening composition comprising polydextrose, monosaccharides, and/or disaccharides; JP 7067536 for teaching the combination of polydextrose and sugar; and Yatka et al. for teaching a composition comprising polydextrose and additional sugar compounds including sucrose and maltose. In making its rejections, the Office Action further alleged that “[s]ynergism would be inherent to that of Wong et al, JP 7067536 and Yatka et al as the same components are used” and that “the concept of synergism in the sweetener art is well-known and expected.” Applicant respectfully disagrees.

It is respectfully submitted that the present invention is based on the surprising realization that polydextrose synergistically enhances the sweetness of

common carbohydrate sweeteners, i.e. mono- and/or disaccharides. The most common of these carbohydrate sweeteners include sucrose, fructose, glucose, lactose, etc. The sweeteners in question are natural products possessing a nice, tasty sweetness making them much used in the food industry. They are, however, caloric in nature and possess certain other negative characteristics, such as being harmful to diabetics and having cariogenic properties on teeth.

The enhanced sweetness obtainable by the combination of said sweetener(s) and polydextrose in accordance with the present invention makes it unexpectedly possible (and contrary to prior beliefs) to reduce the amount of saccharide in question without loss of sweetness.

Wong et al. disclose a synergistic sweetening composition comprising polydextrose and a halogenated and deoxygenated derivative of sucrose. The halogenated compound of Wong et al., i.e. 1-chloro-1'-deoxysucrose, is a very specific synthetic compound. It is closely related to the synthetic sweetener Sucralose which is a dichloro substituted dideoxy derivative of sucrose. These selectively halogenated synthetic compounds are so-called intense sweeteners. Sucralose, for example, has a sweetness that is about 600 times as strong as that of common sugar. The fact that polydextrose has been found to synergistically increase the sweetness of one specific halogenated derivative of sucrose with an intense sweetness of its own in no way teaches or makes it obvious or even likely that polydextrose has any such effect on the non-halogenated mono- and disaccharides of the present invention.

It is further submitted that the halogenated and deoxygenated compound of Wong et al. is not a carbohydrate. It is also not a disaccharide as it lacks an essential oxygen atom of the disaccharide molecule. Consequently, it is clearly distinct from the purely carbohydrate saccharide compounds found in the present invention. Wong et al. teaches polydextrose has a synergistic sweetening effect on one very special halogenated disaccharide derivative. This does not anticipate or make obvious the present invention which is based on a totally different group of sweeteners.

The 1-chloro-1'-deoxysugar of Wong et al., which has an intense sweetening power of its own, is combined with polydextrose, which is not sweet, to obtain a good tasting edible product. Intense sweeteners are typically synthetic compounds having a greater sweetening intensity, and usually a lower caloric value, than that of sugar. Each intense sweetening agent, as is taught by Wong et al., is chemically distinct and presents a different challenge with respect to its actual use in ingestible compositions. For example, one intense sweetener may present stability problems (such as Aspartame), while another intense sweetener may have an associated bitter taste of off-note (such as Saccharin).

In accordance with the teachings of Wong et al., the person skilled in the art finds that the sweetness of one very specific compound, i.e. 1-chloro-1'-deoxysucrose, is affected by polydextrose. It is respectfully submitted that the skilled artisan could not in any clear and logical manner realize that polydextrose has a sweetness-enhancing effect on other sugar compounds. In fact, based on Wong et al., the opposite is true. By picking out one so specific and synthetic sugar as 1-

chloro-1'-deoxysucrose, Wong et al. suggests that the synergistic effect is a specific property existing for the combination of this compound with polydextrose and that it is surprising in its own context. No where in Wong et al. is it taught or even suggested of any likelihood that the same effect would be true for other compounds and other combinations.

It is respectfully submitted that Wong et al. does not make obvious the notion that polydextrose has the capacity of synergistically enhancing the sweetness of non-halogenated mono- and disaccharides, which include among their kind the most commonly used natural sweeteners such as sucrose and fructose.

JP 7067536 discloses that a hard candy in shape-retaining property can be obtained by blending 15-80 wt % of reduced polydextrose with the residual part of at least one kind of saccharide selected from sugars and sugar alcohols as main components. There is no disclosure by JP 7067536, however, of any synergistic enhancing of the sweetness of the sugar or sugar alcohol by the polydextrose. Accordingly, based on the JP 7067536 disclosure, the skilled artisan would not have been able to know that out of the sugars and sugar alcohols suggested, polydextrose would have a special effect on the sugars. That is, the skilled artisan would not be able to deduce from JP 7067536 that they could still get a desired sweetness with a reduction in the amount of sugars due to the sweetening enhancing effect of polydextrose on the sugar compound.

Neither could the skilled artisan obtain the present invention from a combination of Wong et al. and JP 7067536. Although it is respectfully argued that the skilled person would not combine the two disclosures, even if they did combine

them, it would not teach or suggest that polydextrose enhanced the sweetness of non-substituted natural sugars because JP 7067536 does not relate to enhancing the sweetness of its product and Wong et al. clearly is directed to a specific property of one specific polydextrose/chlorodeoxysugar combination which is not at all used or mentioned in JP 7067536.

Yatka et al. discloses chewing gum products containing polydextrose and methods of making such products. Polydextrose is regarded as a bulk sweetener which can replace other sweeteners. In column 3, lines 61-64, Yatka et al. teaches that when polydextrose is used to replace sucrose and syrup, **the combination results in a lower sweetness of the product**, resulting in the need for the use of intense sweeteners such as aspartame. Thus, Yatka et al. actually teaches away from the present invention, which is based on the surprising observation that polydextrose, in fact, increases the sweetness of sucrose.

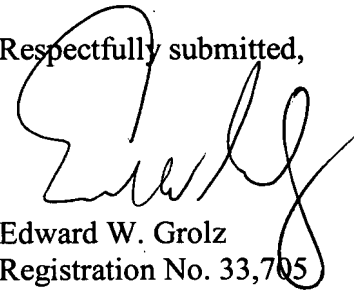
It is further submitted that there is no such disclosure in Yatka et al., which alone or in combination with Wong et al. and/or JP 7067536 teaches or suggests to the skilled person that polydextrose can be used for enhancing the sweetness of sugars as defined by the present invention. Yatka et al. teach that polydextrose reduces the sweetness of sucrose in chewing gums. Wong et al. teach that polydextrose enhances the sweetness of 1-chloro-1'-deoxysucrose. JP 7067536 discloses that polydextrose provides low calorie and shape to candy. No matter how

one tries to combine the teachings of these references, one will not and can not obtain the present invention.

It is noted that the Office Action also cited as of interest U.S. Patent No. 6, 777,397 to Zehner et al. Zehner et al. disclose that mixtures of sucrose and fructose are useful for reducing caloric intake. According to Zehner et al., see specifically claim 9, the product may contain polydextrose as a diluent. As taught on page 8, lines 58-61, the polydextrose diluent **reduces the sweetness** while maintaining low caloric value. Like Yotka et al., this is contrary to the findings forming the basis of the present invention.

Accordingly, based on the clear distinctions outlined above, it is respectfully submitted that the claimed invention is both novel and inventive over the cited prior art. Consequently, the rejection of the claims based on Wong et al., JP 7067536 and Yotka et al. are respectfully requested to be withdrawn. It is respectfully submitted that all the claims in the application as presently submitted contain patentable subject matter and a Notice of Allowance is earnestly solicited.

Respectfully submitted,



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